



**Beaumont Hospital
Department of Nephrology and Renal Nursing**

**Guideline Name: The management of a pregnant Patient on
Haemodialysis**

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1.0 Guideline Statement.

Nursing care will be directed towards patient education, preventing & management of haemodialysis complications and to provide psychological and emotional support for the patient. To advise the pregnant patient regarding options and complications that can occur with her pregnancy when on maintenance haemodialysis.

2.0 Aim / Purpose of Guideline.

- € To provide guidelines for all staff working within the Nephrology department in the management of the pregnant patient whilst on haemodialysis. To ensure the optimal outcome for mother and baby depending on several criteria. : The cause of ESRD, Native output of the patient, Hypertension.
- € To improve the patient's haemodialysis treatment sessions and reduce complications that may affect the developing foetus
- € To increase awareness about complications of pregnancy in women on haemodialysis for nephrology nurses.
- € Outline guidelines for the first, second and third trimester including delivery procedure.

3.0 Scope of Guideline.

This guideline applies to all staff working within the Department of Nephrology in Beaumont Hospital. It is intended as a guide towards best practice for all members of the multidisciplinary team involved in the care of the pregnant patient receiving haemodialysis.

4.0 Definitions

The Haemodialysis Patient

The Haemodialysis patient refers to a patient with ESRD on the long term maintenance haemodialysis programme.

5.0 Responsibilities

The nurse looking after the pregnant patient on haemodialysis must be aware of complications that can occur and be familiar with guidelines for best practice.

- Be aware of complications that can arise for pregnant patients and adhere to guidelines for best outcomes achievable.
- Develop and update a haemodialysis plan suited for each individual patient.
- Take preventative measure to eliminate haemodialysis complications.
- Review patients blood levels, adequacy and amend prescription weekly.
- Participate in monthly team meetings to review the patient and baby's progress.
- Liase with members of the monthly disciplinary team in the care of the patient and baby
- Participate in ongoing education which will provide best practice standards and support for the pregnant patient.

Members of the renal team must:

- Participate in monthly team meetings to review the mother and baby's progress.
- Participate in patient assessment and prescribe appropriate treatment accordingly weekly.
- Liase with the maternity hospital and obstetrician to monitor the mothers and baby's progress.

6.0 Procedure:

6.1 Confirmation of the pregnancy:

- € InitiallyConfirm pregnancy by blood testing.
- € Arrange meeting with Renal Consultant, Dialysis Registrar, Clinical Nurse Manager as soon as possible to discuss the pregnancy with patient and her partner.
- € The Renal consultant will outline complications and possible outcomes that the patient may encounter during pregnancy.
 - Spontaneous Abortion
 - Hypertension.
 - Pre Eclampsia.
 - Polyhydramnios.
 - Premature Birth.
 - Foetal Abnormalities.
- € The first prenatal visit and ultrasound should be arranged as soon as possible. It would be advantageous for the patient if the Obstetrician was known to the Renal Team but this is not possible in some cases.
- € A delivery date should be discussed & the possibility of a C-Section as this mode of delivery is indicated to avoid premature labour and foetal distress.

6.2 1st Trimester:

- € In general most patients will require at least 20 hours haemodialysis per week, minimum 4-5 sessions. Some patients with residual function may require less. Pre dialysis urea should be less than 17.
- € Avoid intra dialytic hypotension.
 - Blood pressure changes can be detrimental to the foetus especially in the first trimester and close monitoring is essential.
- € Initially medications should be reviewed and those contraindicated in pregnancy. Only calcium acetate or calcium carbonate binders should be used. Lanthanum carbonate (foznol), Sevelamer (renagel) and aluminium based binders should be avoided. Alpha Calcitriol can be used - adjust dose according to plasma calcium,

phosphate and PTH levels. Ace Inhibitors, Statins and Angiotensin receptor blockers are contraindicated during pregnancy.

- € Heparin may be changed to clexane. This is the drug of choice due to its low molecular structure.
- € Weekly bloods & tests should be performed, which will be reviewed by the renal registrar and the haemodialysis nursing staff.
 - Uric acid,
 - Alk phos, Alt, LFT's
 - CBC, U/E, CPM, Tco2 weekly.
 - Ferritin and TIBC. Folate, Vit B12 monthly.
 - Urine culture monthly
- € Weekly review of patient's volume status by renal doctor.
- € Hypertension and any signs of oedema should be monitored that could indicate Pre-Eclampsia.
- € The dietitian should discuss the patient's dietary history, protein & calorie needs should be calculated for pregnancy.
 - A low sodium diet is recommended to aid blood pressure control.
 - High protein, high calorie intake.
 - Recommendations for the 1st trimester: Calorie intake of 1925 daily. Protein intake of 66g daily.
 - The patient should be encouraged to monitor her potassium intake.
 - Additional water based vitamins may be added: 5mg Folic acid OD (Consult with dietician), Orovite & "Pregnance & Vit D" which provided 15mg zinc, 2.5ug Vit D. Increase calcium as needed to keep serum calcium levels normal.
 - The patient should be encouraged to keep a diary of her intake.
- € Haemodialysis may be increased during the 1st and 2nd trimester and eventually in the third trimester to daily haemodialysis if required.,
 - More frequent dialysis is gentler on the mother's body.
 - Less traumatic for the baby by reducing the incidence of

polyhydramnios and reducing urea and water load

- Results in less dialysis induced hypotension. Blood pressure should be less than 140/90 and the drugs of choice to control hypertension would be Methyldopa, Labetolol, nifedipine and Amlodipine.

6.3 2nd Trimester:

€ The anaemia of E S R D can worsen significantly during pregnancy with expected plasma volume expansion and the patient's limited ability to increase blood red cell production.

- Target haemoglobin between 10.5g/dl and 12.0 g/dl should be achieved. (NICE guidelines, 2007) The EPO dose may need to be significantly increased.
- The correction of anaemia increases the success rate of pregnancy and prevents hypoxemic stress on the foetus.
- Administer Iv Venofer as per standard guidelines
- Target pre urea less than 17.

€ The patient should be reviewed by pre natal team every two weeks. Weekly review of patient's volume status by renal team is vital.

€ An ultrasound should be performed in the 2nd trimester which will reveal if the foetus is actively growing with appropriate amniotic fluid.

€ The Dietician should review the patient in the 2nd trimester and stress the importance of daily variety of high quality protein foods.

- Adequate dietary prescription is mandatory for maternal health & foetal development.
- Calorie intake may be increased by 300 for the 2nd and 3rd trimester.
- Protein intake may be increased by 10g for the 2nd and 3rd trimester.
- A 3 day food diary may be performed to ascertain that the patient is achieving her calorie and protein intake requirements.

- Target weight gain (non ESRF pregnancy) 11.5 – 16kg.

6.4 3rd Trimester:

- € Haemodialysis treatments will be increased according to blood biochemistry and fluid gains.
- € Weekly Volume status by renal team very important at this stage.
- € Pre natal visits may be increased to once weekly
- € Dexamethasone may be given for foetal lung maturity in the event of premature labour
- € The patient should be re-educated regarding her admission to the maternity hospital, the C- section procedure and transfer to Beaumont for Haemodialysis post delivery.

7.0 Distribution

The Divisional Nurse Manager will circulate a copy of the policy to the relevant areas. The Clinical Nurse Manager in each area is responsible to ensure all staff access and read the policy. The policy will also be available on a designated computer in each of the renal clinical areas under *Renal Policy Folder June 2009* and on the nursing policy page of the intranet.

8.0 Filing

A copy will be filed in the policy and procedure book folder in each unit. The master copy will be filed in the Divisional Nurse Managers office.

9.0 Review

This policy will be reviewed in two years, November 2011.

10.0 Superseded/ Obsolete Documents

This is the first guideline document for care of the pregnant patient on haemodialysis.

11.0 References